

# **Program Guide**

for

## **Water Pump Repair Assistant**

*A short term Apprenticeship Curriculum  
for  
International Labour Organisation/ Time Bound Program  
and  
World Education/Brighter Future Project*



Council for Technical Education and Vocational Training  
**CURRICULUM DEVELOPMENT DIVISION**

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## **Introduction**

The International Programme on the Elimination of Child Labour (IPEC) of the International Labour Organisation (ILO) has promoted a variety of measures to progressively eliminate child labour, giving priority to the eradication of the worst forms of child labour in Nepal. IPEC's interventions are implemented in partnership with the government, trade unions, employer's associations and non-governmental organizations. One of the innovative programmes promoted by IPEC include the Time Bound Programme (TPB), which aims to prevent and eliminate selected worst forms of child labour, as defined in ILO Convention No. 182, within a defined period of time.

The objective of the Time-Bound Programme (TBP) is to contribute to the Master Plan of His Majesty's Government of Nepal for the Elimination of Child Labour. The Time-Bound Programme is going to take various steps in eliminating the identified seven worst forms of child labour in Nepal: child porters, child domestics, children in trafficking, child raggickers, children in carpet factories, children in mine/stone quarries and child bonded labour.

The educational interventions of the TBP in Nepal have been among the most effective instruments for the prevention of child labour and the rehabilitation of former child workers. The TBP & Brighter Future Programme (BFP) of World Education (WEI) measures promote access to free education and appropriate vocational training and apprenticeship opportunities for all children and youth removed from the identified worst forms of child labour. In this context, ILO and World Education (WEI) have taken the initiative to design apprenticeship-training programs in various trade areas for the older children working in the worst forms of child labour.

## **Rational of the programme**

The vocational trainings in Nepal have resulted mixed outcomes. Although, there is a rapid proliferation of the technical and vocational training providers and the youth enrolment has been in increasing trend, there are some fundamental problems. Basically, the training programmes are much structured and the training delivery is made in institution-based environment. Similarly, there are minimum standard that needs to be maintained for enrolment. Considering the low literacy background of children engaged in the identified worst forms of child labour, the standard for admission to vocational training institutes is too high. Furthermore, many vocational training institutes have a very high cost. Therefore, ILO and WEI have taken the initiative to look more carefully into apprenticeship models as an alternative to vocational training for older working children.

According to IPEC Nepal and WEI, the term apprenticeship for TBP refers to supervised on-the-job training that provides practical skills and theoretical knowledge and also the experience of a work environment. It is a learning method that prepares a young person at least 14 years of age for a real job by giving him/her a set of well-defined occupational abilities through close supervision and guidance from a potential employer, or from a mentor. Apprenticeship can build confidence in young people, and remind them that they have a positive role to play in their community, and in their country.

## **Overall objectives**

The overall objective of the programme is to eliminate exploitative and hazardous child labour by providing them with skills and knowledge to attain better employment and economic opportunities and linking them to national development efforts including economic, educational and labour market policies of Nepal.

### **Terminal objectives**

After the completion of this course an apprentice will be able:

- to assist in making pump housing,
- to assist in performing electrical works,
- to repairing and maintaining mechanical parts of a pump and hand pump, and
- to perform simple pipe fittings related to pump.

### **Course description**

This course is designed to help the apprentices to provide basic knowledge and skills on water pump installation, repair and maintenance. The apprentices will develop their competencies working in a workshop or site under the supervision of a mechanic in an unstructured way. This course especially provides skills focusing on making pump housing, performing electrical works related to pumps, performing repair and maintenance of mechanical parts of old pumps. This course also provides skills on performing pipe fittings and maintenance of a hand pump.

### **Target group**

This programme is targeted to the older children engaged in the worst forms of child labour who are above 14 years old. In Nepal, the worst form of child labour includes;

1. Domestic child labourers,
2. Child porters,
3. Child bonded labourers,
4. Children involved in trafficking,
5. Rag picking children,
6. Child labourers in carpet industry, and
7. Child labourers in stone quarries and mines.

### **Group size**

The number of apprentice can vary depending upon the facilities available with the apprenticeship-training providers. **Ideally, this should not exceed five in numbers.**

### **Entry criteria**

An apprentice must be or have

1. Engaged in the worst form of child labour.
2. Between 14 to 18 years old.
3. Interest and commitment in apprenticeship training.
4. Current employer's/guardian's consent.
5. Basic literacy.

### **Duration**

Three to five months (2 to 3 hours per day and 5 to 6 days a week) OR as per the agreement between apprenticeship provider and TBP implementing organisation. However, the theory and practical time should be arranged in the ratio of 20:80.

**Medium of instruction** Nepali.

### **Pattern of attendance**

The apprentice should secure 90% attendance during the training period.

### **Certificate requirements**

National Skill Testing Board (The Skill Testing Division of the Council for Technical Education and Vocational Training, CTEVT) according to its requirement administers skill tests and provides certificate to apprentice.

### **Apprenticeship provider's qualification**

An apprenticeship provider must have:

1. Enthusiasm and motivation to train the older children in the worst form of child labour
2. Qualification and experience in training.
3. Proper tools, equipment and space for training.
4. Safe working environment.
5. Possibility of employment opportunity.

### **Trainees evaluation**

The apprenticeship-training providers will continuously evaluate the apprentice based on their performance.

### **Equipment, tools and materials**

Depending upon the frequency of uses and the number of apprentice the number/quantity of tools/equipment/material varies.

<b>S.No.</b>	<b>Name of the tools/equipment</b>	<b>Units</b>
	Pipe wrench	
	Vice with stand	
	Dye set	
	Screw driver	
	Chisel/ hammer	
	Hacksaw with frame	
	Adjustable wrench	
	Pliers	
	Spanner wrench (goti wrench)	
	Monkey pliers	
	Anti pliers	
	Putter	
	L & key set	
	Ring wrench	
	Multi meter	
	Center punch	
	File set	
	Pipe piece for bearing fit	
	Measuring tape	
	Spirit level	
	Caliper	

### Summary of Duties and Competencies

S. No	Duties and Competencies/Tasks/Skills	Time (in hours)		
		Th.	Prac.	Total
<b>A.</b>	<b>Assist to management.</b>			
	A.1. Assist in measurement.	2	3	5
	A.2. Assist in work estimation (pipe).	2	3	5
	A.3. Assist in billing.	2	2	4
	A.4. Weigh coil.	1	2	3
	A.5. Assist in purchasing materials.	2	4	6
	A.6. Manage tools.	2	3	5
	A.7. Clean workshops.	1	2	3
<b>B.</b>	<b>Assist to make pump housing.</b>			
	B.1. Assist to select site for pump.	1	2	3
	B.2. Level pump foundation.	1	2	3
	B.3. Fix pump in position.	1	2	3
	B.4. Provide cover to pump.	1	2	3
	B.5. Assist to install switch box.	2	4	5
<b>C.</b>	<b>Assist to perform electrical works.</b>			
	C.1. Check electrical current.	3	3	6
	C.2. Check /Replace capacitor.	1	2	3
	C.3. Replace burned coil.	1	3	4
	C.4. Clean coil housing.	1	3	4
	C.5. Change insulating paper.	2	2	4
	C.6. Assist to wing new coil.	2	3	5
	C.7. Varnish coil.	2	2	4
	C.8. Check /Repair electrical leakage.	2	3	5
<b>D.</b>	<b>Assist to repair mechanical parts.</b>			
	D.1. Check/ grease bearing.	1	3	4
	D.2. Check /Replace oil seal.	1	2	3
	D.3. Check /Replace impeller.	1	2	3
	D.4. Check rotor shaft.	1	3	4
	D.5. Check /Replace motor fan.	1	2	3
	D.6. Print motor body.	1	3	4
	D.7. Assemble/ disassemble motor.	2	3	5
	D.8. Check /Repair motor body.	1	3	4
	D.9. Check water lifting.	1	3	4
	D.10. Fit pulley.	1	2	3
	D.11. Check /Replace belt (fan, pulley).	1	2	3
	D.12. Change coupling rubber.	2	2	4
<b>E.</b>	<b>Assist in pipe fitting works</b>			
	E.1. Cut pipe.	2	3	5
	E.2. Cut thread.	2	5	7
	E.3. Fit elbow.	1	2	3
	E.4. Fit socket.	1	2	3
	E.5. Fit T.	1	2	3
	E.6. Fit Union.	1	2	3
	E.7. Fit check valve.	2	3	6
	E.8. Fit get valve.	2	4	6

	E.9. Fit nipple.	2	3	5
	E.10. Fit pipe.	2	4	6
	E.11. Check / Repair water leakage.	1	2	3
	E.12. Fit reducer.	1	3	4
	E.13. Fit / Remove plug.	1	2	3
	E.14. Fit flange.	1	2	3
<b>F.</b>	<b>Maintain hand pumps.</b>			
	F.1. Change bucket	1	2	3
	F.2. Place non-return valve (rubber, leather city valve)	2	4	6
	F.3. Change / Fit bed (checa = bed)		2	2
	F.4. Change / Fit flange	1	2	3
	F.5. Replace piston	1	2	3
	F.6. Replace handle	1	2	3
	F.7. Replace pump body	1	3	4
<b>G.</b>	<b>Communicate with other.</b>			
	G.1. Communicate with water pump repairer.	1	2	3
	G.2. Communicate with client.	1	2	3
	G.3. Communicate with employer.	1	2	3
	G.4. Communicate with colleagues.	1	2	3
	G.5. Communicate with supervisor.	1	2	3
	G.6. Communicate with supplier.	1	2	3
	G.7. Communicate with visitor.	1	2	3
	G.8. Communicate with junior.	1	2	3
	G.9. Communicate with hardware shops.	1	2	3
	G.10. Receive telephone call.	1	2	3
<b>H.</b>	<b>Grow professionally.</b>			
	H.1. Consult water pump repairer.	1	2	3
	H.2. Visit equipped working places/sights	1	3	4
	H.3. Read related materials (Documents, manuals, brochures etc.).	1	3	4
	H.4. Seek trainings places /programs.	1	4	5
	H.5. Attend training/ seminar/workshops.	1	2	3
	H.6. Watch Audio Visuals.	1	2	3
	H.7. Browse World Wide Web.	1	2	3
	<b>Total</b>	<b>90</b>	<b>157</b>	<b>247</b>

**Duty 1: Assist to management.**

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Assist in measurement.	<input type="checkbox"/> Units and measurement. <input type="checkbox"/> MKS/SI and FPS system <input type="checkbox"/> Conversion from MKS to FPS and vice versa.	2	3	5
2.	Assist in work estimation (pipe).	<input type="checkbox"/> Estimating and costing (concept only) <input type="checkbox"/> Simple Calculation, (addition, subtraction, multiply, division) <input type="checkbox"/> Percentage <input type="checkbox"/> Size, unit, quantity of materials used and rate of work	2	3	5
3.	Assist in billing.	<input type="checkbox"/> Simple Calculation <input type="checkbox"/> Debit, credit, receipt and bill (concept only)	2	2	4
4.	Weigh coil.	<input type="checkbox"/> Measurement of weight, <input type="checkbox"/> Cable size, gauge number	1	2	3
5.	Assist in purchasing materials.	<input type="checkbox"/> Properties of materials <input type="checkbox"/> Quantity and quality <input type="checkbox"/> Rate list and quotation	2	4	6
6.	Manage tools.	<input type="checkbox"/> Importance and identification of hand tools. <input type="checkbox"/> Tools placement and handling <input type="checkbox"/> Care and uses of tools <input type="checkbox"/> Safety precaution	2	3	5
7.	Clean workshops.	<input type="checkbox"/> Importance of cleaning <input type="checkbox"/> Periodical cleaning procedure. <input type="checkbox"/> Safety precaution	1	2	3

**Duty 2: Assist to make pump housing.**

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Assist to select site for pump.	<input type="checkbox"/> Importance and identification of site <input type="checkbox"/> Site selection techniques <input type="checkbox"/> Soil types and water level	1	2	3
2.	Level pump foundation.	<input type="checkbox"/> Importance of foundation and surface levelling	1	2	3

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
		<input type="checkbox"/> Preparation of pump foundation. <input type="checkbox"/> Levelling procedure.			
3.	Fix pump in position.	<input type="checkbox"/> Importance of pump fixing. <input type="checkbox"/> Fixing procedure. <input type="checkbox"/> Safety precaution.	1	2	3
4.	Provide cover to pump	<input type="checkbox"/> Importance of pump guard <input type="checkbox"/> Pump handling method	1	2	3
5.	Assist to install switch box	<input type="checkbox"/> Basic electricity, current, voltage and resistance with their units (Concept only) <input type="checkbox"/> Importance and identification of electrical components <input type="checkbox"/> Wiring diagram and symbol. <input type="checkbox"/> Cable connection.	1	4	5

### Duty 3: Assist to perform electrical works.

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Check electrical current	<input type="checkbox"/> Types of current (AC, DC, Phase, neutral and live) <input type="checkbox"/> Use of multimeter <input type="checkbox"/> Checking procedure <input type="checkbox"/> Safety precaution	3	3	6
2.	Check /Replace capacitor	<input type="checkbox"/> Importance and identification of capacitor. <input type="checkbox"/> Purpose, uses and types of capacitor. <input type="checkbox"/> Replacing and testing procedure <input type="checkbox"/> Safety precaution	1	2	3
3.	Replace burned coil	<input type="checkbox"/> Importance and identification of coil. <input type="checkbox"/> Purpose, uses and types of coil. <input type="checkbox"/> Continuity test. <input type="checkbox"/> Replacing procedure. <input type="checkbox"/> Safety precaution.	1	3	4
4.	Clean coil housing	<input type="checkbox"/> Importance and identification of coil housing. <input type="checkbox"/> Housing cleaning procedure.	1	3	4



S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
		☒ Safety precaution			
5.	Change insulating paper	☒ Importance and identification of Insulator. ☒ Purpose, uses and types of insulator. ☒ Insulating procedure. ☒ Safety precaution.	2	2	4
6.	Assist to rewind new coil	☒ Cable size, type and number of turns, ☒ Winding types (clockwise and counter clockwise) ☒ Winding Procedure ☒ Safety precautions.	2	3	5
7.	Varnish coil	☒ Importance, purpose and uses of coil insulation. ☒ Varnishing materials. ☒ Varnish procedure. ☒ Safety precaution.	2	2	4
8.	Check /Repair electrical leakage	☒ Concept of electrical leakage, voltage drop and resistance ☒ Faultfinding. ☒ Safety precaution.	2	3	5

#### Duty 4: Assist to repair mechanical parts.

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Check/ grease bearing	☒ Importance and identification of bearing. ☒ Size of and number of bearing ☒ Greasing procedure. ☒ Safety precaution	1	3	4
2.	Check /Replace oil seal.	☒ Importance and identification of oil seal. ☒ Purpose and uses of seal. ☒ Seal replacing procedure ☒ Safety precaution	1	2	3
3.	Check /Replace impeller.	☒ Importance and identification of impeller. ☒ Function and types of	1	2	3

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
		impeller. <input type="checkbox"/> Care and servicing of impeller. <input type="checkbox"/> Replacing procedure <input type="checkbox"/> Safety precaution			
4.	Check rotor shaft	<input type="checkbox"/> Importance and identification of rotor. <input type="checkbox"/> Rotor checking procedure. <input type="checkbox"/> Safety precaution	1	3	4
5.	Check /Replace motor fan.	<input type="checkbox"/> Importance and identification of fan. <input type="checkbox"/> Purpose and uses of fan. <input type="checkbox"/> Fan replacing procedure <input type="checkbox"/> Safety precaution.	1	2	3
6.	Paint motor body.	<input type="checkbox"/> Purpose and importance of painting. <input type="checkbox"/> Introduction of paints <input type="checkbox"/> Painting procedure. <input type="checkbox"/> Safety precautions.	1	3	4
7.	Assemble/ disassemble motor	<input type="checkbox"/> Identification and importance of motor components. <input type="checkbox"/> Test of worn parts. <input type="checkbox"/> Overhauling Procedure <input type="checkbox"/> Safety precaution	2	3	5
8.	Check /Repair motor body	<input type="checkbox"/> Importance and function of motor. <input type="checkbox"/> Identification of motor parts. <input type="checkbox"/> Component check up and crack detecting procedure. <input type="checkbox"/> Safety precaution.	1	3	4
9.	Check water lifting	<input type="checkbox"/> Water lifting (concept only) <input type="checkbox"/> Trouble shooting procedure <input type="checkbox"/> Safety precaution	1	3	4
10.	Fit pulley	<input type="checkbox"/> Importance and purpose of pulley. <input type="checkbox"/> Pully fitting procedure. <input type="checkbox"/> Safety precaution.	1	2	3

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
11.	Check /Replace belt (fan, pulley)	<input type="checkbox"/> Importance and Identification of fan belt. <input type="checkbox"/> Size and number of belt <input type="checkbox"/> Adjustment of belt tension and slackness. <input type="checkbox"/> Trouble shooting	1	2	3
12.	Change coupling rubber	<input type="checkbox"/> Importance and identification of coupling <input type="checkbox"/> Purpose of coupling. <input type="checkbox"/> Purpose of using gland, rubber and seal for water leakage. <input type="checkbox"/> Changing procedure. <input type="checkbox"/> Safety precaution	2	2	4

**Duty 5: Assist in pipe fitting works.**

S. No	Tasks	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Cut pipe	<input type="checkbox"/> Identification of G.I. pipe. <input type="checkbox"/> Size, type, diameter and length of pipe <input type="checkbox"/> Size, dimension, diameter, length, quality of pipe (Concept only) <input type="checkbox"/> Pipe cutting procedure. <input type="checkbox"/> Safety precautions.	2	3	5
2.	Cut thread	<input type="checkbox"/> Importance and identification of thread. <input type="checkbox"/> Purpose of threads <input type="checkbox"/> Types, and size of thread. <input type="checkbox"/> Number of threads per inch. <input type="checkbox"/> Thread cutting procedure <input type="checkbox"/> Safety Precautions.	2	5	7
3.	Fit elbow	<input type="checkbox"/> Importance and identification of elbow <input type="checkbox"/> Purpose and uses of elbow. <input type="checkbox"/> Fitting procedure <input type="checkbox"/> Safety precaution	1	2	3
4.	Fit socket	<input type="checkbox"/> Importance and identification of socket. <input type="checkbox"/> Purpose and uses of socket. <input type="checkbox"/> Fitting procedure <input type="checkbox"/> Safety precaution	1	2	3
5.	Fit T	<input type="checkbox"/> Importance and identification of Tee	1	2	3

S. No	Tasks	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
		<ul style="list-style-type: none"> <li>☒ Purpose and uses of T.</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution</li> </ul>			
6.	Fit Union	<ul style="list-style-type: none"> <li>☒ Importance and identification of unions (brass and G.I.).</li> <li>☒ Purpose and uses of union</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution.</li> </ul>	1	2	3
7.	Fit check valve	<ul style="list-style-type: none"> <li>☒ Importance and identification of check valve.</li> <li>☒ Parts of identification.</li> <li>☒ Purpose and uses of check valve.</li> <li>☒ Trouble shooting.</li> <li>☒ Fitting procedure</li> <li>☒ Safety precautions.</li> </ul>	2	3	6
8.	Fit gate valve	<ul style="list-style-type: none"> <li>☒ Importance and identification of gate valve</li> <li>☒ Purpose and uses of gate valve.</li> <li>☒ Fault finding</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution.</li> </ul>	2	4	6
9.	Fit nipple	<ul style="list-style-type: none"> <li>☒ Importance and identification of nipple</li> <li>☒ Purpose and uses of nipple</li> <li>☒ Procedure</li> <li>☒ Safety precaution.</li> </ul>	2	3	5
10.	Fit pipe	<ul style="list-style-type: none"> <li>☒ Pipe fitting procedure.</li> <li>☒ Safety precaution.</li> </ul>	2	4	6
11.	Check / Repair water leakage	<ul style="list-style-type: none"> <li>☒ Identification of leakage points.</li> <li>☒ Uses of jute, gasket, seal, gland, putting for air tight,</li> <li>☒ M-seal and other leakage proofing materials.</li> <li>☒ Procedure</li> <li>☒ Safety precaution</li> </ul>	1	2	3
12.	Fit reducer	<ul style="list-style-type: none"> <li>☒ Importance and identification</li> <li>☒ Purpose and uses of reducer.</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution.</li> </ul>	1	3	4
13.	Fit / Remove plug	<ul style="list-style-type: none"> <li>☒ Identification of plug</li> <li>☒ Purpose and uses of plug</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution</li> </ul>	1	2	3
14.	Fit flange	<ul style="list-style-type: none"> <li>☒ Importance and identification of flange.</li> <li>☒ Purpose and uses of flange.</li> <li>☒ Fitting procedure.</li> <li>☒ Safety precaution.</li> </ul>	1	2	3

**Duty 6: Maintain Hand Pumps**

S. No	Competencies	Related Technical Knowledge	Time (in hours)		
			Th.	Prac.	Total
1.	Change bucket	<ul style="list-style-type: none"> <li>☒ Importance and identification of bucket.</li> <li>☒ Function, uses and care of bucket</li> <li>☒ Changing procedure</li> <li>☒ Safety precaution.</li> </ul>	1	2	3
2.	Place non-return valve (rubber, leather city valve)	<ul style="list-style-type: none"> <li>☒ Importance and identification of non-return valve.</li> <li>☒ Function and type of non-return valve.</li> <li>☒ Care of the valve.</li> <li>☒ Fitting procedure</li> <li>☒ Safety precaution.</li> </ul>	2	4	6
3.	Change / Fit bed (checa = bed)	<ul style="list-style-type: none"> <li>☒ Importance and identification of bed</li> <li>☒ Function of bed/checa bed.</li> <li>☒ Changing procedure</li> <li>☒ Safety precaution.</li> </ul>		2	2
4.	Change / Fit flange.	☒ Refer task no.14 of duty 5	1	2	3
5.	Replace piston.	<ul style="list-style-type: none"> <li>☒ Importance and identification of piston and its components.</li> <li>☒ Function of piston.</li> <li>☒ Care and weariness of piston.</li> <li>☒ Replacing procedure.</li> <li>☒ Safety precaution.</li> </ul>	1	2	3
6.	Replace handle.	<ul style="list-style-type: none"> <li>☒ Importance and identification of handle.</li> <li>☒ Size, length and stroke of handle</li> <li>☒ Replacing procedure</li> <li>☒ Safety precaution.</li> </ul>	1	2	3
7.	Replace pump body	<ul style="list-style-type: none"> <li>☒ Identification of pumps components.</li> <li>☒ Trouble shooting.</li> <li>☒ Procedure</li> <li>☒ Safety precaution.</li> </ul>	1	3	4

**Duty 7: Communicate with other**

S. No	Competencies	Related Technical Knowledge	Time (in hrs.)		
			Th.	Prac.	Total
1.	Communicate with water pump repairer.	<input checked="" type="checkbox"/> Meaning and importance of communication. <input checked="" type="checkbox"/> Type of communication (oral, sign/gesture and written). <input checked="" type="checkbox"/> Oral communication techniques. <input checked="" type="checkbox"/> Communication for cooperative/collaborative tasks. <input checked="" type="checkbox"/> Learning and information sharing. <input checked="" type="checkbox"/> Prior consultation on assigned work with the seniors. <input checked="" type="checkbox"/> Uses of appropriate communication language (with higher and lower position staffs.)	1	2	3
2.	Communicate with client.	<input checked="" type="checkbox"/> Importance of listening and viewing the client's opinions (offering opinions, supporting statement and questions and clarification of the proposed job).	1	2	3
3.	Communicate with employer.	<input checked="" type="checkbox"/> Refer to task 2	1	2	3
4.	Communicate with colleagues.	<input checked="" type="checkbox"/> Importance of interpretation and explanation of the proposed job with friends.	1	2	3
5.	Communicate with supervisor.	<input checked="" type="checkbox"/> Refer to task 1	1	2	3
6.	Communicate with supplier.	<input checked="" type="checkbox"/> Refer to task 2	1	2	3
7.	Communicate with visitor.	<input checked="" type="checkbox"/> Refer to task 2	1	2	3
8.	Communicate with junior.	<input checked="" type="checkbox"/> Refer to task 4	1	2	3
9.	Communicate with	<input checked="" type="checkbox"/> Demand and supply	1	2	3

S. No	Competencies	Related Technical Knowledge	Time (in hrs.)		
			Th.	Prac.	Total
	hardware shops.	order. ☒ Bill / invoice. ☒ Material supply and delivery.			
10.	Receive telephone call.	☒ Meaning, importance and purpose of telephone ☒ Telephone receiving technique ☒ Etiquette of receiving telephone call. ☒ Message writing technique.	1	2	3

**Duty 8: Grow professionally.**

S. No	Competencies	Related Technical Knowledge	Time (in hrs.)		
			Th.	Prac.	Total
1.	Consult water pump repairer.	☒ Importance of participating in career exploration activities with the repairer.	1	2	3
2.	Visit other's working place/ sight.	☒ Importance of learning from different workplaces and site visits.	1	3	4
3.	Read related materials (Documents, manuals, brochures)	☒ Importance of learning from trade relevant documents, manuals and other job related sheets.	1	3	4
4.	Attend training/ seminar/workshops	☒ Need of growing professionalism. ☒ Importance of career development opportunities inside and outside the organization.	1	4	5
5.	Watch Audio-Visual.	☒ Familiarization of TV's channel/A/V aids. ☒ Importance of leaning from A/V.	1	2	3
6.	Browse World Wide Web.	☒ Familiarization with computer. ☒ WWW browsing techniques.	1	2	3

S. No	Competencies	Related Technical Knowledge	Time (in hrs.)		
			Th.	Prac.	Total
7.	Seek trainings places / programs	<input checked="" type="checkbox"/> Importance of trainings in career development. <input checked="" type="checkbox"/> Possible training providers/institutes for refresher trainings.	1	2	3